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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,027	09/30/1999	CHRISTINA HEINMUELLER	10191/1109	3786

26646 7590 05/15/2003

KENYON & KENYON
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

DUDEK, JAMES A

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/367,027

Applicant(s)

HEINMUELLER ET AL.

Examiner

James A. Dudek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO-A-96/10775 ('775) in view of 5,549,568 ('568).

Per claim 19-22 and 24-38, '775 teaches the claimed invention except for the optical retardation layer is biaxial retardation layer with different refractive indices such that n_z applies along an axis of retardation layer which is essentially parallel to the normal line of the liquid crystal cell. However, '568 teaches such a configuration for the benefit of reduced inversion and improved contrast ratios. Accordingly, it would have been obvious to one of ordinary skill at the time the invention was made to combine the biaxial configuration of '568 with the cell of '775 in order to improve contrast and decrease inversion.

Per claim 23, '775 in view of '568 lack the retarder placed between the liquid crystal and substrate. However, it was well known to place the compensator in this way in order to decrease cell thickness. Accordingly, it would have been obvious to one of ordinary skill at the time the invention was made to the well known placement and '568 in order to decrease cell thickness.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

Applicant's arguments filed 3/11/03 have been fully considered but they are not persuasive. Applicant asserts that the examiner has not met its burden of establishing a prima facie case. In support of this assertion, applicant alleges that "Abileah et al. do not suggest the use of one biaxial layer as recited in claim 20 of the present invention" and there is no suggest to use a biaxial layer in cell subdividing pixels, since Abileah et al. teach orienting the retardation layer to the liquid cell between the layers.

Regarding applicants first allegation, Abileah et al. teaches in the abstract using biaxial film for the reasons cited in the rejection. Furthermore, the embodiment taught at column six, lines 25-58 discloses first and second biaxial retardation films in order to obtain a "display [having] high contrast ratios and reduced inversion throughout an enlarged range of viewing angles."

Regarding applicant's second allegation, first, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Although, applicant's motivation appears to be similar to that taught by Abileah et al.

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Second, typically all cells have subdivided pixel. Usually they are divided into red, blue and green sub-pixels. Although, compensators exist which compensate down to the sub-pixel, most use one sheet to cover the entire cell—that is, one compensator is used for all the sub-pixels.

Third, the liquid crystal layer when view in one direction leaks light differently then when viewed from the opposite direction. To improve this, multidomain cells were introduced. The way the molecules align within the sub-pixel with or without an electric field is changed from sub-pixel to sub-pixel or even within the sub-pixel. As a result, a more even distribution of light leakage is created across all viewing angles.

Fourth, compensation sheets formed across the entire cell work with multidomain cells as well as non-multidomain cells. Typically, compensators resolve some of the viewing problems but compensators do not create even viewing contrast for all viewing angles. This limitation occurs whether the compensator is used in a multidomain cells or not.

Finally, whether Abileah et al. is not divided into sub-pixels will not affect the way a compensator is used in a cell dividing pixels into sub-pixels, because in the past sheet compensators were used in multidomain cells and non-multidomain cells in the same capacity for the reasons suggested above.

The dependence on optical characteristics, although it is not clear from the argument what exactly they are trying convey, compensators compensate for the optical characteristics of the liquid crystal layer. Thus, the compensator is dependent of the optical characteristics of the LC layer to improve contrast. If the birefringence of the LC layer in the non-field state change—that is a different liquid crystal is used, then the compensator should be changed to match the change in the LC birefringence.

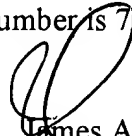
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 308-4782. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-308-7721 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



James A. Dudek
Primary Examiner
Art Unit 2871

May 13, 2003